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| APPLICATION NO.          | FILING DATE | FIRST NAMED INVENTOR    | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------|-------------|-------------------------|---------------------|------------------|
| 10/611,577               | 07/01/2003  | Maxim B. Belotserkovsky | PU030131            | 5200             |
| 24498                    | 7590        | 10/17/2005              | EXAMINER            |                  |
| THOMSON LICENSING INC.   |             |                         | PHAN, TRI H         |                  |
| PATENT OPERATIONS        |             |                         | ART UNIT            |                  |
| PO BOX 5312              |             |                         | PAPER NUMBER        |                  |
| PRINCETON, NJ 08543-5312 |             |                         | 2661                |                  |

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/611,577 | <b>Applicant(s)</b><br>BELOTSEKOVSKY ET AL. |  |
|                              | <b>Examiner</b><br>Tri H. Phan       | <b>Art Unit</b><br>2661                     |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 6-20 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 and 6-12 is/are allowed.
- 6) ☒ Claim(s) 13,14 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment/Arguments*

1. This Office Action is in response to the Response/Amendment filed on June 22<sup>nd</sup>, 2005.

Claim 5 is now canceled. Claims 1-4 and 6-20 are now pending in the application.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 13-14 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Westerlund et al.** (U.S.6,757,654; hereinafter refer as '**Westerlund**') in view of **Rosenberg et al.** (U.S.6,141,788; hereinafter refer as '**Rosenberg**').

- In regard to claim 13, **Westerlund** discloses in Figs. 6-8 and in the respective portions of the specification about the method and system for improving forward error correction 'FEC' technique (for example see fig. 7; Abstract), which comprising the steps of *receiving the data packet ('packet') that contains data and first FEC data* (for example see figs. 6-8; col. 10, lines 19-24; wherein each packet comprises primary and redundant data "*first FEC data*" as disclosed in col. 7, lines 30-22; col. 9, line 64-66) *and deciding whether to use the second FEC data to*

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*process the data* (for example see col. 10, lines 21-24; wherein the redundant data is pertained from the previous packet “*second FEC data*” as disclosed in col. 10, lines 1-11). **Westerlund** does disclose about the technique for transferring the primary and redundant data in separate packets, i.e. ‘data packet’ and ‘redundant packet’, or other alternative formats (for example see col. 23, lines 10-16); however, **Westerlund** lacks what **Rosenberg** discloses an “*FEC packet*” (for example see col. 2, lines 27-33).

It would have been obvious to one with ordinary skill in the art at the time of invention was made to implement the “*FEC packet*” as taught by **Rosenberg** into the **Westerlund**’s ‘redundant packet’, with the motivation being to create an FEC packet associated with a given data packet that can be sent to both FEC-capable and FEC-incapable receivers as disclosed in **Rosenberg**: col. 1, lines 53-56; col. 2, lines 39-41, for error correction on the data packet.

- Regarding claim 14, in addition to features in base claim 13 (see rationales pertaining the rejection of base claim 13 discussed above), **Westerlund** lacks what **Rosenberg** further discloses *processing the data using second FEC data to produce partially decoded data* (for example see col. 3, lines 10-23; wherein the  $f(a,b)$  of the FEC packet can be used to recover the lost media payload b).

- In regard to claim 17, in addition to features in base claim 13 (see rationales pertaining the rejection of base claim 13 discussed above), **Westerlund** further discloses about the *processing the data using only the first FEC data* (for example see col. 10, lines 21-24).

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- Regarding claim 19, in addition to features in base claim 13 (see rationales pertaining the rejection of base claim 13 discussed above), **Westerlund** lacks what **Rosenberg** further discloses about *ignoring the second FEC data to conserve power* (for example see col. 2, lines 39-41; where although it is not stated that a result is the conservation of power, it is an effect of ignoring FEC packet data as noted by applicant in the claim; therefore all systems that ignore FEC packet data will conserve power).

It would have been obvious to one with ordinary skill in the art at the time of invention to decide whether or not to use the second FEC data for the purpose of allowing FEC-incapable receivers not able to handle FEC data to simply ignore it. The motivation for giving receivers the ability to ignore FEC data would be so that these receivers can still receive the transmitted data but not use the error correction of the FEC data; therefore, conserving the consumed power.

- In regard to claims 18 and 20, in addition to features in base claims 13 and 17 (see rationales pertaining the rejection of base claims 13 and 17 discussed above), **Westerlund** and **Rosenberg** disclose the method for applying forward error correction in the transmission network in sequencing order as disclosed in **Rosenberg**: fig. 1. It is obvious that the *order* of the process designed by the system engineering as choices, which is different from system to system and can be programmed by engineering choices.

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to implement the invention as taught by **Westerlund** and **Rosenberg** in a sequencing order, wherein the order is provided as system engineering choices by programming code for the application as desired.

***Response to Arguments***

4. Applicant's arguments with respect to claims 13-20 have been considered but are moot in view of the new ground(s) of rejection.

***Allowable Subject Matter***

5. Claims 15-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 1-4 and 6-12 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Many references in the art disclose the method and system for using the forward error correction. Most of those references are comprising first FEC encoder/decoder, second FEC encoder/decoder for providing the error correction codes for the encoded data, such as that found in Hwang, Seong-Kyu [U.S. 6,490,260], Maiuzzo [U.S. 2003/0192001], Kidorf et al [U.S. 2002/0056064]. But no prior art reference utilizes the second FEC encoder and FEC packet formatter for encoding and producing second FEC packet when the additional TDMA time slot is available for the FEC packet as claimed in the claimed invention 1; or where “the first FEC decoder partially decode the data payload and second FEC data ... using the first FEC data containing in the FEC packet, the second FEC decoder .... based on the second FEC data” as claimed in the claimed invention 8.

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan, whose telephone number is (571) 272-3074. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on (571) 272-3126.

**Any response to this action should be mailed to:**

**Commissioner of Patents and Trademarks**

Washington, D.C. 20231

**or faxed to:**

**(571) 273-8300**

Hand-delivered responses should be brought to Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tri H. Phan  
October 14, 2005



**BRIAN NGUYEN**  
**PRIMARY EXAMINER**